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The Genus *Rimelia* (Lichens) from the Hawaiian Islands

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Seven species of the genus *Rimelia* are recognized in the Hawaiian Islands. Most of them are common in tropical and subtropical regions of the world. *R. albinata* K.H.Moon, Kurok. & Kashiw. is described as a new species, *R. ramescens* (Zahlbr.) K.H.Moon & Kurok. is treated as a distinct species, and *R. clavulifera* (Räsänen) Kurok. is newly recorded for the Hawaiian Islands.

Key words: Hawaii, lichen, *Rimelia albinata*, *Rimelia clavulifera*, *Rimelia ramescens*

When Hale and Fletcher (1990) proposed *Rimelia* as a new genus in the Parmeliaceae, they included 12 species, which are cosmopolitan but to be distributed chiefly in tropical and subtropical regions. Hillmann (1940) was the first lichenologist to study *Parmelia* s. lat. in the Hawaiian Islands and recorded 41 taxa; Magnusson and Zahlbruckner (1944) and Magnusson (1955) added 24 species of *Parmelia* s. lat. to the Hawaiian lichen flora. In these studies, five species of *Rimelia* were recorded, though they were treated under *Parmelia*. However, Hale and Fletcher (1990) recognized the occurrence of four species of the genus in Hawaii; *R. cetrata* (Ach.) Hale & A.Fletcher, *R. hawaiiensis* (H.Magn.) Hale & A.Fletcher, *R. reticulata* (Taylor) Hale & A.Fletcher and *R. ruminata* (Zahlbr.) Hale & A.Fletcher. In the present study, we recognize seven species of *Rimelia* for the Islands: four previously reported, one newly found, one considered to be a composite species and one new species.

Material and Methods

Moon and Kashiwadani had a chance to make field surveys of lichens in the Hawaiian Islands from 1997 to 1999, which was carried out under the project "Studies on the speciation of cryptogam in the Hawaiian Islands". About 160 specimens of the genus *Rimelia* were collected through the survey and the results of the taxonomic studies on them are presented in this paper. In addition, other specimens collected by various botanists, now preserved in BM, CBG, CBM, H, S, TNS, UPS and W, were also studied. Specimens cited below are preserved in BISH and TNS, unless otherwise stated.

Collectors are abbreviated as follows; KM = K. H. Moon, HK = H. Kashiwadani, YO = Y. Ohmura.

Morphological characters were studied by a light microscope. Sections of apothecia and thalli for anatomical studies were cut by hand with a razor blade or by a freezing microtome and mounted in GAW or lactophenol cotton-blue solution. Chemical substances were studied by color tests, by microcrystal methods (MCT), by thin-layer chromatography (Culberson 1972, Culberson and Kristinsson 1970) using the solvent B system, and high performance liquid chromatography (HPLC).

Results

Key to the species of *Rimelia* in the Hawaiian Islands

1. Thallus sorediate 2
1. Thallus esorediate 4
2. Soralia laminal to submarginal; lower surface of soralia always black ....*R. reticulata* (Taylor) Hale & A.Fletcher
2. Soralia laminal to submarginal and sphaerical; lower surface of sorediate lobes often mottled white 3
3. Thallus containing lobaric acid but lacking fatty acid............... *R. albinata* K.H.Moon, Kurok. & Kashiw.
3. Thallus lacking lobaric acid, but sometimes containing fatty acid........................ .... *R. clavulifera* (Räsänen) Kurok.
4. Thallus lacking pustules and schizidia ... 5
4. Thallus schizidiate or pustulate.............. 6
5. Upper surface smooth and continuous .... *R. cetrata* (Ach.) Hale & A.Fletcher
5. Upper surface more or less wrinkled; upper cortex often flaked off especially near the margin..... *R. ramescens* (Zahlbr.) K.H.Moon & Kurok.
6. Lobes moderately densely ciliate; upper surface flaked off and schizidiate............. .... *R. hawaiiensis* (H. Magn.) Hale & A.Fletcher
6. Lobes rarely or very sparsely ciliate; upper surface often reticulately ridged ....*R. ruminata* (Zahlbr.) Hale & A.Fletcher

Rimelia albinata K.H.Moon, Kurok. & Kashiw., sp. nov.

Species cum thallo ut in *Rimelia clavulifera*, sed sorediis ad apicum stipium brevium formantibus et acidum lobaricum continenti differt.

Type collection. U.S.A. Hawaii. Molokai Island. Molokai District: below Puu Kolekole (21°05′N, 156°54′W), on soil, alt. ca. 1150 m, 4 November 1997, Y. Ohmura 4210–holotype in BISH; isotype in TNS.

Thallus moderately to loosely adnate, whitish glaucous; lobes 2–6 mm wide, dentate and short-laciniate at the margin, laciniae 0.5–1.5 mm wide, often becoming revolute or subterete and sorediate at the tips; upper surface faintly reticulately maculate, glabrous; cilia moderate, simple or rarely branched, 1–1.5 mm long; lower surface black except for very narrow apical zones, often mottled white especially on short laciniae, rhizines moderate to dense, mostly simple, ca. 1 mm long. Apothecia not seen.

Chemistry: atranorin, salazinic acid and lobaric acid (trace).

Rimelia albinata (Fig. 1) is characterized by dentate laciniate lobes with a mottled white lower surface, capitate soredia formed at the tips of laciniae revolute or becoming subterete towards the tips and the presence of lobaric acid.

This new species closely resembles *R. clavulifera* (Räsänen) Kurok. These two species have similar thalli with soredia, dentate laciniate with mottled white lower surface and produce atranorin, salazinic acid and consalazinic acid. However, it can be distinguished from the latter by the whiter thalli and the production of lobaric acid, which has never been reported in the genus *Rimelia*. In addition, *R. clavulifera* sometimes produces fatty acid as reported by Kurokawa (1979).

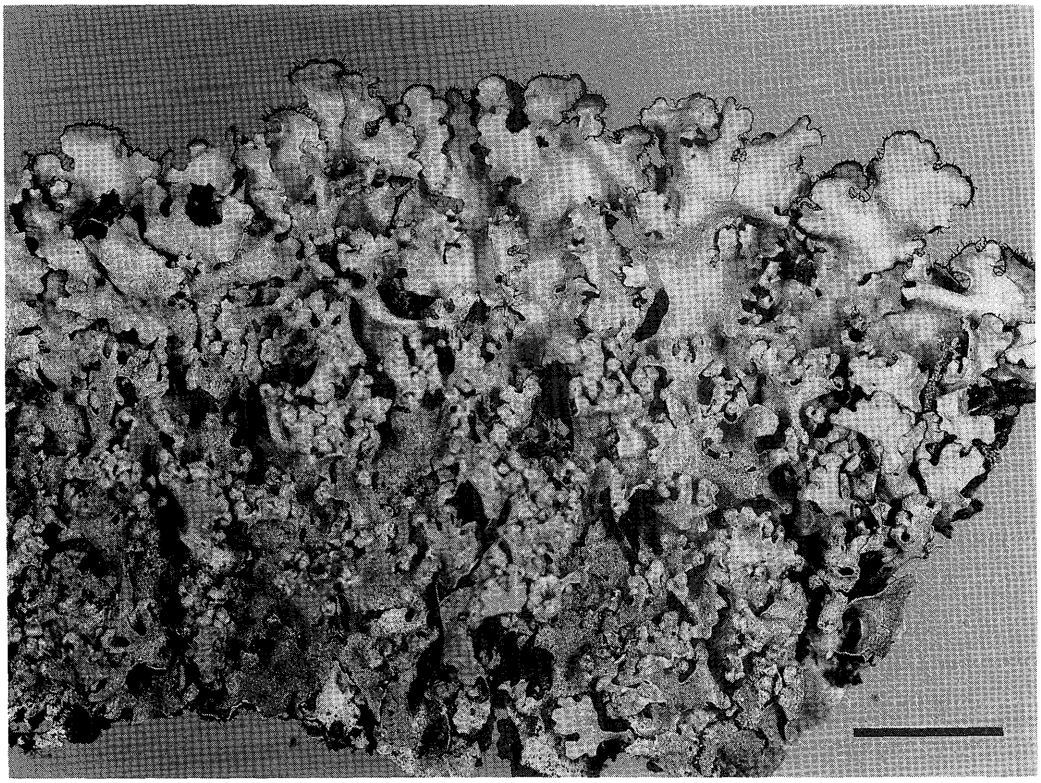

Fig. 1. *Rimelia albinata* K.H.Moon, Kurok. & Kashiw. (Holotype). Scale bar = 10 mm.

This new species often grows on rocks under exposed condition at elevations up to 1200 m. At present it is known only from the Hawaiian Islands: Kauai and Molokai Islands.

Specimens examined:
Hawaii. Kauai Island. Waimea District: along Mohihi Trail, Kohua Ridge, on bark of *Eucalyptus* sp., alt. 1160–1240 m, KM 2113. Molokai Island. Molokai District: along R.460, ca. 7 km ENE of Maunaloa, on rocks, alt. ca. 320 m, HK 40276.

Rimelia cetrata (Ach.) Hale & A.Fletcher in Bryologist **93**: 26 (1990).

Parmelia cetrata Ach., Syn. Lich. 198. 1814. Type: Pennsylvania, U.S.A., Muhlenberg s.n. (H-ACH, lectotype, Hale and Fletcher 1990; not seen).

This species is characterized by having a smooth cortex throughout the lobe surface and by lacking asexual propagules. It shows conspicuous variations in regard to the shape of lobes and the density of cilia. Saxicolous specimens tend to have their main lobes with narrow laciniae (Fig. 2c), whereas corticolous specimens usually have wider lobes (2–15 mm) with acuminate lobules (Figs. 2a, 2b). In addition, dense cilia are formed in some specimens, but are quite rare and sparse in others. Gyrophoric acid seems to be an accessory substance.

Rimelia cetrata is widely distributed in temperate, subtropical and tropical regions of N., C. and S. America, Pacific regions and Africa. The present species was collected throughout the lowland areas of the Hawaiian Islands, but rarely collected at elevations above 2000 m.

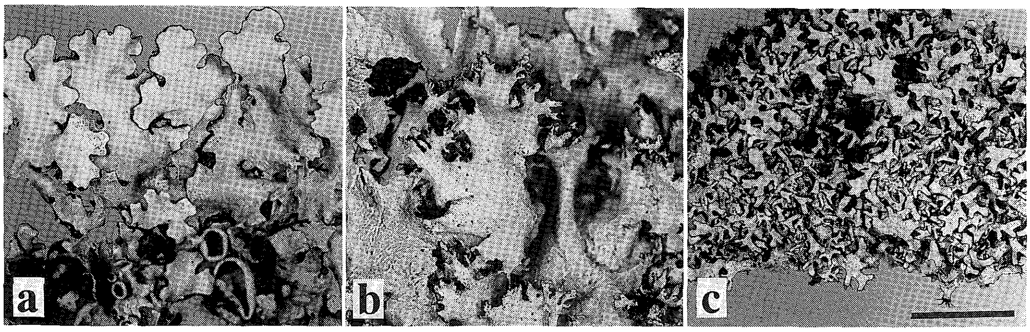

Fig. 2. Lobe variation of *Rimelia cetrata* (Ach.) Hale & A.Fletcher. a) corticolous specimen with wide lobes, b) corticolous specimen with marginal acuminate lobules, c) saxicolous specimen with narrow laciniae. Scale bar = 10 mm.

Representative specimens examined:

Hawaii. Hawaii Island. Kau District: Hawaii Volucanoes National Park, along Mauna Loa Strip Road, on decayed wood of *Acacia koa*, alt. ca. 1340 m, KM 3736. North Hilo District: 43 km W of Hilo Village, along Saddle Rd, on bark of *Acacia koa*, alt. ca. 1870 m, KM 3674. North Kohara District: 300 m N of Kuainiho, along Mamalahoa Hwy, on rocks, alt. ca. 740 m, KM 3873. North Kona District: Scrub forest along hwy, 19.25 miles N Kailua, June 1965, Hale 32857 (S). South Kona District: Kau-Kona road, on 1887 flow, on rocks, 16 April 1938, Skottsberg 726 (S). Kauai Island. Hanalei District: along Kalalau Trail, Haena, on bark of *Pandanus* sp., alt. 20–100 m, HK 39841; Hanea Bay, on Cauvanus, 27 Aug. 1938, Selling 5619 (S); Kilauea, on abrk, Jan. 1910, Faurie 78 (UPS). Kawaihau District: Keahua Forestry Arboretum, ca. 10 km W of Wailua, on bark, alt. ca. 160 m, KM 2042. Koloa District: Tropical Botanical Garden, Lawai, on bark of *Chrysalidocarpus* sp., alt. 30–60 m, HK 39802. Waimea District: Along Kukui Trail, Kukui, on bark of *Grevillea robusta*, alt. 500–850 m, HK 39777. Lanai Island. Lahalina District: Gardens of the Gods, 500 m NE of Kanepuu, on rocks, alt. ca. 500 m, KM 3601. Maui Island. Hana District: Auwahi, on rock (lava), alt. ca. 860 m, HK (40891) and KM. Lahaina District: ca. 2 km W of Kaulalewelewe, on bark of *Acacia koa*, alt. ca. 590 m, HK (41135) and KM. Makawao District: Waikamoi Preserve, ca. 0.7 km E of Puu Nianiau, on twigs of *Meterosideros polymorpha*, alt. ca. 1800 m, HK (40589) and KM; Haleakala, Aug. 1910, Faurie 576 (UPS). Molokai Island. Molokai District: along R 460, ca. 7 km ENE of Maunaloa, on rock, alt. ca. 320 m, HK 40273; Edge of ravine near upper Maunahui camp, on bark or soil, alt. ca. 1100 m, 10 July 1938, Selling 5730 (UPS). Oahu Island. Honolulu District: Makapuu Point, on exposed rocks, alt. ca. 115 m, YO 3865. Waianae District: ca. 2 km W of Kaena, on volcanic rocks (lava), alt. ca. 30 m, HK (41220) and KM.

Rimelia clavulifera (Räsänen) Kurok. in J. Jpn. Bot. **66**: 158 (1991).

Parmelia clavulifera Räsänen, Ann. Bot. Soc. Zool. Vanamo **20** (3): 4 (1944). Type: Tahiti, Vieillard s. n. (H, lectotype, Hale and Fletcher 1990).

The present species has been confused with *R. reticulata* (Taylor) Hale and A.Fletcher in the present area (Hale 1990). However, this species is easily separated from the latter species by capitate soralia on short laciniae, a mottled white lower surface and the production of fatty acid and gyrophoric acid as accessories.

This species is widely distributed in tropical and subtropical areas in the world. In the Hawaiian Islands, it is very common, usually found in lowland areas below 2000 m.

Representative specimens examined:

Hawaii. Hawaii Island. South Hilo District: Hilo Forest Reserve, 32 km W of Hilo Village, along Saddle Rd, on bark of *Sophora* sp., alt. ca. 1570 m, HK 41880. South Kohara District: Kohara Forest Reserve, 2 km N of Waimea, on bark of *Alnus* sp., alt. ca. 1050 m, KM 3842. Kauai Island. Kawaihau District: Keahua Forestry Arboretum, ca. 10 km W of Wailua, on bark, alt. ca. 160 m, KM 2051a. Koloa District: Tropical Botanical Garden, Lawai, on bark of *Chrysalidocarpus* sp., alt. 30–60 m, HK 39799. Waimea District: along Mohihi Trail, Kohua Ridge, on bark, alt. 1160–1240 m, HK 39749. Lanai Island. Lahalina District: Gardens of the Gods, 500 m NE of Kanepuu, on rocks, alt. ca. 500 m, KM 3602. Maui Island. Hana District: Auwahi, on rocks, alt. ca. 1200 m, HK (40856) and KM. Lahaina District: ca. 1 km W of Kaulalewelewe, on exposed rocks along ridge, alt. ca. 680 m, HK (41105) and KM. Makawao District: Hosmer Grove, Haleakala, on rocks, alt. ca. 1900 m, HK (40683) and KM. Molokai Island. Molokai District: along the trail between Palaau and Kalaupapa, on bark of *Prunus yedoensis*, alt. 5–480 m, HK 40130. Oahu Island. Koolauloa District: Kahuku, on bark of *Acacia* sp., alt. 460–470 m, HK (40462) and KM.

Rimelia hawaiiensis (H.Magn.) Hale & A.Fletcher in Bryologist **93**: 28 (1990).

Parmelia hawaiiensis H.Magn. in H.Magn. and Zahlbr., Ark. Bot. **31A** (6): 106 (1944). Type: Upper Maunahui Camp, Molokai, Hawaii, Skottsberg 5696 (S, lectotype, Hale and Fletcher 1990).

Parmotrema austrocetratum Elix & J.Johnston in Mycotaxon **31**: 495 (1988)—*Rimelia austrocetrata* (Elix & J.Johnston) Hale & A.Fletcher in Bryologist **93**: 26 (1990). Type: Burgess Park, New Plymouth, on tree trunk in remnant forest, alt. 60 m, New Zealand, J. A. Elix 7979 (CBG, isotype).

The present species strongly resembles *R. cetrata*, but is distinguished from the latter by the presence of schizidia formed by flaked cortices on the upper surface. When Hale and Fletcher (1990) transferred this species to *Rimelia*, they proposed a combination under *Rimelia* but cited no specimen other than the lectotype. This species is very common in the Pacific area including Japan in the north and Australia and New Zealand in the south.

Rimelia hawaiiensis is unique in producing schizidia on the upper surface. The upper surface is linearly or subirregularly inflated to form dactyls, which are soon erupted at the tips to form numerous pieces of cortices, which remain as schizidia on the upper surface.

The specimen of Skottsberg 1224 (S) reported as *Parmelia cetrata* Ach. by Magnusson (1944) is now referred to *R. hawaiiensis* because it has clear schizidia. The specimen of Faurie 85 (UPS) identified as *Parmelia cetrata* var. *ulcerata* Zahlbr. by Zahlbrukner is now referred to *R. hawaiiensis* because it has clear schizidia with sparse cilia.

Representative specimens examined:

Hawaii. Hawaii Island. North Kohara District: 2 km SSW of Puuanahulu, along Mamalahoa Hwy, on bark of *Erythrina sandwicensis*, alt. ca. 600 m, KM Moon 3875. Lahalina District: Hulopoe, 2 km NE of Lanai City, on rocks, alt. ca. 550 m, KM 3585. Kauai Island. Koloa District: along Maluhia Rd, ca. 2.5 km N of Koloa, on bark of *Acacia* sp., alt. ca. 100 m, YO 3927b; Koloa, Dec. 1909, Faurie 85 (UPS). Waimea District: along Mohihi Trail, Kohua Ridge, on bark of *Melicope* sp., alt. 1160–1240 m, YO 3978. Maui Island. Hana District: Auwahi, on bark, alt. ca. 1200 m, HK (40872) and KM. Lahaina District: ca. 1 km W of Kaulalewelewe, on exposed rocks along ridge, alt. ca. 680 m, HK (41108) and KM. Makawao District: ca. 3 km E of Olinda, on bark of *Acacia koa*, alt. 1300–1600 m, HK (40786) and KM. Molokai Island. Molokai District: along R. 460, ca. 7 km ENE of Maunaloa, on rocks, alt. ca. 320 m, HK 40278. Oahu Island. Honolulu District: Mt Tantalus, on rock with mosses, alt. 500–600 m, HK (40450) and KM. Waianae District: Trail to summit of unnamed peak between Hapeapa and Puu Kanehoa, Waianae Mts, alt. ca. 510 m, 28 Aug. 1969, Takashi Tuyama; Mts Waianae, Palehua, alt. ca. 650 m, 23–25 Aug. 1922, Skottsberg 1224 (S).

Australia. New South Wales: Robertson Nature Reserve, Robertson, on trunk of *Cyathea* in remnant rainforest, alt. ca. 700 m, J. A. Elix (40719) and H. Streimann. Queensland: Maiala National Park, Mt Glorious, alt. ca. 700 m, S. Kurokawa 5472. Victoria: Cunningham's Gap, National Park, Southeast Queensland, on slope of Mt Cordeaux, on the upper branches of a fallen tree, R. Filson 7801. Indonesia. Java. Prov. Batavia: In monte Megamendong, ad saxa secus viam pagum Tugu, alt. ca. 1200 m, V. Schiffner 3367.

Japan. Honshu. Prov. Harima: Mt Seppiko, Shikama-gun, alt. 550–730 m, H. Kashiwadani 5696.

Prov. Inaba: Karo, Tottori, Y. Ikoma 6091. Prov. Izu: Basara Pass, Matsuzaki, Kamo-gun, S. Kurokawa 88023. Prov. Kai: Lake side of Saiko, Saiko-mura, Minami-Tsuru-gun, on rocks (andesite), alt. ca. 960 m, H. Shibuichi 4050. Prov. Kazusa (Pref. Chiba): Seiwa-Kenmin-no-mori, Kimitsu, alt. ca. 250 m, A. Matsushita 714 and 763 (CBM). Prov. Kii: Mt Koya, Y. Numajiri. Prov. Mikawa (Pref. Aichi): Mt Myojin, Minami-Shitara-gun, alt. ca. 750–1010 m, H. Kashiwadani 13000. Prov. Musashi (Pref. Saitama): Kawamata, Urayama, Chichibu-gun, on chert, alt. ca. 550 m, H. Shibuichi 9290. Prov. Sagami: Saijo-ji Temple, Daiyu-zan, Odawara, M. Nuno and M. Togashi. Prov. Shimofusa (Pref. Chiba): Daifuku-yama, Umegase-keikoku, Ichihara, on trunk of deciduous hardwood, alt. ca. 80 m, H. Harada 12084 (CBM). Prov. Shinano: Azusayama, Kawakami-mura, Minami-Saku-gun, alt. ca. 1420–1520 m, Y. Jinzenji 228. Prov. Suruga: Gotenba, 28 April 1935, Y. Asahina. Prov. Tamba: Ohyama-mura, Taki-gun, 14 July 1927, Y. Asahina. Kyushu. Prov. Bungo: Hiju-dai, S. Kurokawa 62332. Prov. Buzen: Mt Hikosan, alt. ca. 750 m, S. Kurokawa 62519. Prov. Chikuzen: Mt Hohman-zan, Dazaifu, S. Kurokawa 62548. Prov. Higo: Danto-machi, 7 Aug. 1933, F. Fujikawa. Prov. Hyuga: Ebino Heights, Ebino-shi, on trunk of *Clerodendron trichotomum*, alt. ca. 960 m, M. Kiyota (Herb. S.Kurokawa 6301). Shikoku. Prov. Awa: Hiura, Kito-mura, Naka-gun, alt. ca. 480 m, H. Kashiwadani 14844. Prov. Iyo: Panorama-dai, Omogo, alt. ca. 700 m, S. Kurokawa 60109. Prov. Sanuki (Pref. Kagawa): near Emon-no-taki Temple (Emon-fudo), Tonosho-cho, Shodo-gun (Shodo-shima Island), on rocks, alt. 350–450 m, KM 3583. Prov. Tosa: Mt Kuishi, Tosa-gun, S. Kurokawa 60153. Nepal. Langtang, Langtang Valley, Bagmati, alt. ca. 3000 m, T. Iwashina 583.

New Zealand. North Island: East Cape, Tapuaeroa River Gorge at base of Mt Whanakao, on river Boulders, alt. ca. 120 m, J. K. Bartlett 23418. Papua New Guinea. Eastern Highland District: Andandara logging area, 40 km south of Kainantu, alt. ca. 1600 m, S. Kurokawa 6034. Philippines. Luzon. Prov. Mountain: Summit of Mt. Data, mossy oak forest, alt. ca. 2300 m, M. E. Hale (26036) and J. Banaag.

Sri Lanka (Ceylon). Horton Planes, Nuwara Eliya, tropical mossy forest and highland grassland, alt. ca. 2310 m, H. Inoue 12542.

Taiwan (Formosa). Prov. Chiai (= Chaiyi): En route from Su-Su-Lu to Mt Ali, alt. ca. 2000–2200 m, S. Kurokawa 617. Prov. Hualien: Mt Nan-Fu-Ta-San, alt. ca. 2600–3000 m, S. Kurokawa 1206. Prov. Kaohsiung: Mt Nanfong, alt. ca. 800–1300 m, S. Kurokawa 2800. Prov. Taitung: Bayu Lake, on rocks, alt. ca. 2200 m, S. Kurokawa 2385.

Rimelia ramescens (Zahlbr.) K.H.Moon & Kurok., comb. nov.

Parmelia ramescens Zahlbr. in H.Magn. & Zahlbr., Ark. Bot. **31A** (6): 96 (1944). Type: Iao Vally, Maui, Hawaii, Faurie 516 (TNS, isolectotype, Hale and Fletcher 1990).

Hale and Fletcher (1990) reduced the present species to a synonym of *R. ruminata* probably because cilia are very rare in these two species. However, *R. ramescens* is quite different in having a rather smooth upper surface which is more or less reticulately wrinkled even near the lobe apices. In addition, it lacks pustules and eminent ridges on the upper surface, which are common in *R. ruminata.* Gyrophoric acid has never been detected in *R. ramescens.*

At present, *R. ramescens* is known only from the Hawaiian Islands.

Specimens examined:

Hawaii. Hawaii Island. North Kohara District: 26 km NW of Waiaka, along Kohara Mountain Rd, on bark of *Casuarina equisetifolia*; alt. ca. 650 m, KM 3931.

Rimelia reticulata (Taylor) Hale & A.Fletcher in Bryologist **93**: 28 (1990).

Parmelia reticulata Taylor in Mack., Fl. Hibern. 148 (1836). Type: Dunkerron, Kerry, Ireland, Taylor s. n. (FH-TAYL, lectotype, Hale and Fletcher 1990).

This species is widely distributed throughout tropical and subtropical areas. It is very common from lowlands to elevations of 2000 m in the Hawaiian Islands. It is often confused with *R. clavulifera*, from which it is distinguished by the lower surface totally lacking an ivory-mottled zone. In addition, fatty acid is never found in the present species.

Representative specimens examined:

Hawaii. Hawaii Island. North Hilo District: 43 km W of Hilo Village, along Saddle Rd, on bark of *Acacia koa*, alt. ca. 1870 m, KM 3675. South Hilo District: Hilo Forest Reserve, 32 km W of Hilo Village, along Saddle Rd, on bark of *Sophora* sp., alt. ca. 1570 m, HK 41881. Kauai Island. Kawaihau District: Keahua

Forestry Arboretum, ca. 10 km W of Wailua, on bark, alt. ca. 160 m, KM 2051b. Koloa District: Tropical Botanical Garden, Lawai, on bark of *Chrysalidocarpus* sp., alt. 30–60 m, HK 39798c. Waimea District: Kokee, on rocks, alt. ca. 1160 m, KM 2105b. Lanai Island. Lahalina District: Hulopoe, 2 km NE of Lanai City, on rocks, alt. ca. 550 m, KM 3588. Maui Island. Hana District: around Paliku Cabin, Naholoku Crater, on tree branch, alt. ca. 2100 m, T. Furuki & T. Yamaguchi (HK, no. 41261). Lahaina District: along the trail between Puu Kukui and Kaulalewelewe, on rocks, alt. 1300–1350 m, HK (41076) and KM. Makawao District: Hosmer Grove, Haleakala, on rocks, alt. ca. 1900 m, HK (40692) and KM. Molokai Island. Molokai District: along the trail between Palaau and Kalaupapa, on rocks, alt. 5–480 m, HK 40155.

Rimelia ruminata (Zahlbr.) Hale & A. Fletcher in Bryologist **93**: 28 (1990).

Parmelia ruminata Zahlbr. in H.Magn. & Zahlbr., Ark. Bot. **31A** (6): 107 (1944). Type: Brother Matthias, Hawaii, Faurie 861 (W, lectotype, Hale and Fletcher 1990).

The present species resembles *R. ramescens* as discussed above. However, it is clearly distinguished from the latter by the irregular prominent ridges on the upper surface, often erupted at the tips to form pustules. In *R. ruminata*, in addition, lobes often form rotund lobules (0.5–1.5 mm in diameter) along the edge or on the upper surface, which are never formed in *R. ramescens.*

Specimens examined:

Hawaii. North Kohara District: Along Kohara Mountain Rd, NW of Waiaka, on bark, alt. ca. 80 m, 7 Sep. 1969, T. Tuyama. Puna District: 1.5 km NW of Kaimu, on bark of *Ficus elastica*, alt. ca. 10 m, KM 3639. South Kohara District: Koaia Tree Sanctuary, 400 m N of Puu Kawaiwai, on bark of *Acacia koa*, alt. 960–1020 m, KM 3925. Kauai Island. Hanalei District: along Kalalau Trail, Haena, on rocks, alt. 20–100 m, HK 39824. Koloa District: along Maluhia Rd, ca. 2.5 km N of Koloa, on bark of *Acacia* sp., alt. ca. 100 m, YO 3927. Lanai Island. Lahalina District: Hulopoe, 2 km NE of Lanai City, on rocks, alt. ca. 550 m, KM 3579. Maui Island. Hana District: Keanae, on bark, alt. ca. 3 m, HK (40545) KM. Lahaina District: Maunalei Arboretum, Puu Kaeo Ridge, on bark, alt. ca. 400 m, HK (41009) KM. Molokai Island. Molokai District: along the trail between Palaau and Kalaupapa, on rocks, alt. 5–480 m, HK 40156.

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文　光喜[a]，黒川　逍[b]，柏谷博之[c]：**ハワイ諸島産マツゲゴケ属（地衣類）**

マツゲゴケ属（*Rimelia*）は熱帯から亜熱帯に広く分布し温帯にも分布を広げている葉状地衣類であり，全世界で17種が報告されている．ハワイ諸島ではこれまでに4種が報告されていたが，最近著者らによって採集された豊富な資料を検討した結果1新種を含む次の7種が認められた；*R. albinata*, *R. cetrata*, *R. clavulifera*, *R. hawaiiensis*, *R. ramescens*, *R. reticulata*, *R. ruminata*．新種の *R. albinata* はマツゲゴケに近縁であるが本属からは未報告であるロバール酸を含む点で明瞭に区別される．*R. ramesens* はこれまで *R. ruminata* の異名として扱われてきたがマキラの形状と裂片全体にシリアを生じる特徴を持つので別種として扱った．また，*R. clavulifera* はハワイ諸島新産である．

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